

REMARKS

35 USC 112

The Examiner rejects Claims 1-3, 8-13, 28-32, 37-42, 47-52, and 57-60 under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter. Specifically, the Examiner rejects Claims 1, 11, 21, 30, 40, 50, and 59 for reciting “a relationship” without explicitly depicting limits or clearly defining the scope of the relationship. Applicants amend the claims to remove reference to “a relationship” and instead replace the language with “trapping the first pixel based on the colorant values of the trigger pixel” or “the maximum adjusted function value,” depending upon the claim. Support for these amendments can be found, for example, on page 14, lines 15-23 of the specification.

Claim Objections

The Examiner objects to Claim 30 for failing to provide proper antecedent basis for the apparatus. Applicants replace “apparatus” with “an apparatus” to correct the language.

35 USC 102(b)

The Examiner rejects Claims 1-3, 9-13, 19-23, 28-32, 38-42, 48-52, and 57-59 under 35 USC 102(b) as being anticipated by Morgana (USPN 6,377,711).

Claim 1

Before discussing Morgana in detail, Applicants focus on the amendments made to Claim 1.

Applicants amend Claim 1 to recite a computer-implemented method for electronically trapping a first digital color image pixel comprising a plurality of colorant values. Support for this amendment can be found, for example, on page 6, lines 27-33 of the specification. The computer identifies a trapping window

comprising a plurality of pixels that surround the first pixel, each of the surrounding pixels comprising a plurality of colorant values. See, for example, page 8, lines 17-19. Figure 5 illustrates different examples of trapping windows.

The computer determines a difference between a sum of magnitudes of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel, and a magnitude of a sum of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixels to obtain a trigger value for each of the surrounding pixels. See, for example, page 10, line 25-page 11, line 4. The computer adjusts the trigger values according to the distance between the first pixel and each surrounding pixel to obtain a distance adjusted trigger value for each of the surrounding pixels. See, for example, page 11, lines 22-23 of the specification.

The computer compares the adjusted trigger values for each of the surrounding pixels to a trigger threshold. See, for example, page 13, lines 9-12 of the specification. The computer identifies any of the surrounding pixels where the adjusted trigger value for the surrounding pixels exceeds the trigger threshold. See, for example, page 13, lines 9-12 of the specification. The computer identifies the trigger pixel with the maximum trigger value. See, for example, page 14, lines 14-15 of the specification. The computer traps the first pixel based on the colorant values of the first pixel and the colorant values of the trigger pixel.

Morgana describes a trapping method where pixels that are diagonally adjacent to the target pixel are selected. Column 4, lines 27-28. Claim 1, on the other hand, recites a trapping window that surrounds the first pixel. Morgana also discloses a prior art trapping method that surrounds the pixel in Figure 3. However, in that method, the pixel is trapped by scanning for edges between the selected pixel and the surrounding pixels. Column 2, lines 49-51. Claim 1 recites comparing the colorant values of the pixels and adjusting for distance.

Furthermore, Morgana fails to teach or suggest using pixels beyond the pixels that are directly adjacent to the first pixel. Claim 1 recites adjusting the trigger value for the distance of the pixel because the trapping window can include multiple layers of pixels. See, for example, Figures 5B-5J.

Applicants amend Claim 1 to recite that the trigger value is adjusted for distance. The adjusted trigger value is then compared to a trigger threshold and the surrounding pixels with adjusted trigger values that exceed the trigger threshold are identified. The feature of adjusting the trigger value based on a corresponding distance was previously recited in Claim 8. With regard to Claim 8, the Examiner conceded that Morgana does not explicitly disclose the limitation, but that Geurts (US Pub. No. 2001/0055130) does disclose the feature in paragraph 18. Geurts, however, fails to teach or suggest determining whether an adjusted trigger values exceeds a trigger threshold. As a result, Applicants respectfully assert that Claim 1 is not taught or suggested by the combination of Morgana and Geurts and is, therefore, patentable.

Claim 3

The Examiner asserts that Figure 2 of Morgana discloses a trapping window that is elliptical in shape. Applicants respectfully assert that Figure 2 of Morgana is being inappropriately applied to Claim 3. Claim 3 recites a trapping window for trapping a first pixel, where the trapping window is elliptical in shape. Figure 2 of Morgana discloses adjacent pixels for an object comprising a processed set of pixels. Column 2, lines 8-11. As a result, Morgana fails to teach or disclose an elliptical trapping window for a first pixel.

Additional limitations recited in the independent claims or the dependent claims are not further discussed because the limitations discussed above are sufficient to distinguish the claimed invention from the cited art.

CONCLUSION

In view of the above, Applicants respectfully posit that the pending claims are allowable. The Examiner is invited to please contact Applicants' attorney at (650) 474-8400 should any questions arise.

Respectfully Submitted,

A handwritten signature in cursive script, appearing to read "Elizabeth Ruzich".

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